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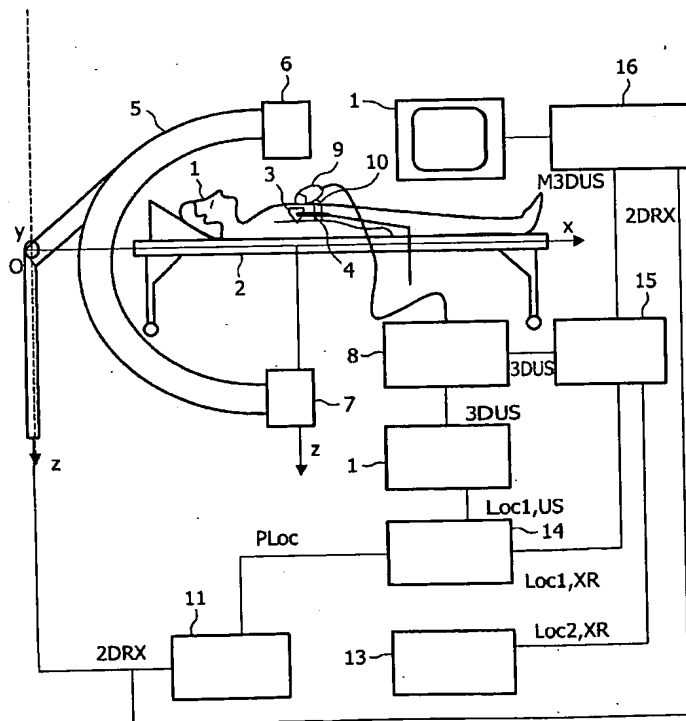
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(54) Title: **SYSTEM FOR GUIDING A MEDICAL INSTRUMENT IN A PATIENT BODY**



(57) Abstract: A medical system is provided comprising a medical instrument (4) to be guided in a patient body, an ultrasound probe (9) for acquiring a 3D ultrasound data set and X-ray acquisition means (5) for acquiring a 2D X-Ray image, means for localizing said ultrasound probe within a referential of said X-Ray acquisition means, means for providing a first localization of said medical instrument within a referential of the ultrasound acquisition means, means for converting said first ultrasound localization into a first X-Ray localization within the referential of said X-Ray acquisition means, means for providing a second X-Ray localization of the projection of said medical instrument in the two-dimensional X-ray image, means for mapping said 3D ultrasound data set with said 2D X-ray image in accordance with a transformation which minimizes a distance between a projection of said first X-Ray localization on said 2D X-Ray image and said second X-Ray localisation.

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